

**Claims:**

1. A method of communicating data over an interface from a base station of a network for mobile telecommunications to a base station controller operative to control the base station, comprising storing user data and diagnostic data  
5 for transmission, selecting user data for transmission in preference to diagnostic data, and selecting diagnostic data traffic for transmission when no user traffic data is stored for transmission.
2. A method according to claim 1, wherein the network is a Universal Mobile Telecommunications System (UMTS) network, the controller is a radio  
10 network controller (RNC), and the interface is an IuB interface.
3. A method according to claim 1, wherein the diagnostic data is provided to a local maintenance terminal connected to the controller for inspection.
4. A method according to claim 1, wherein there are a plurality of data communication channels between the base station and the controller over the  
15 interface, one channel being a diagnostic data channel, and another channel being a user data channel, the base station includes a plurality of data buffers such that data of each channel for transmission is stored before transmission in a respective buffer, the buffers each including an occupancy indicator so that user data is selected for transmission in preference to data from the buffer  
20 for diagnostic data.
5. A method according to claim 4, wherein the controller includes a plurality of further data buffers, such that control data of each channel for transmission to the base station is stored before transmission in a respective buffer, the further buffers each including an occupancy indicator so that user channel  
25 control data is selected for transmission in preference to diagnostic channel control data.

6. A method according to claim 4, wherein the diagnostic data channel is set up in response to a request from the controller to the base station, and control data which is a request for diagnostic data is sent by the controller to the base station, diagnostic data being sent in response.
- 5 7. A method according to claim 6, wherein updated diagnostic data is sent periodically until control data which is a command to stop sending diagnostic data is received by the base station.
8. A network for mobile telecommunications comprising a base station connected via an interface with a base station controller operative to control  
10 the base station, the base station comprising storing means operative to store user data and diagnostic data for transmission, selecting means operative to select user data for transmission in preference to diagnostic data and to select diagnostic data traffic for transmission when no user traffic data is stored for transmission.
- 15 9. A network according to claim 8, in which the network is a Universal Mobile Telecommunications System (UMTS) network, the controller is a radio network controller (RNC), and the interface is an IuB interface.
10. A network according to claim 8, wherein there are a plurality of data communication channels between the base station and the controller over the  
20 interface, one channel being a diagnostic data channel, and another channel being a user data channel, the base station includes a plurality of data buffers such that data of each channel for transmission is stored before transmission in a respective buffer, the buffers each including an occupancy indicator so that user data is selected for transmission in preference to data from the buffer  
25 for diagnostic data.